Sutton (Geo.)

Compliments of the Author.

PLACENTA PREVIA,

AND ITS TREATMENT.

BY

GEORGE SUTTON, M. D.,

OF

AURORA, INDIANA.

Reprinted from the Transactions of the Indiana State Medical Society for 1878.

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The abnormal position of the placenta over the mouth of the uterus is an accident attended with so much danger to the patient, so much anxiety to the physician, and one in which widely different views are entertained by the profession as to its proper treatment, that we regard this subject as among the most important for our consideration and future investigation. Although valuable papers have already been presented to our State Medical Society on placenta previa, still the subject is far from having been exhausted; and from the opposite modes of treatment recommended is certainly still worthy of our most careful investigation. It is more than probable that many of our physicians, whose range of practice is principally confined to the country, have a large amount of valuable unpublished experience on this subject, which, if collected in the form of statistics, would throw light on the frequency of the occurrence of placenta previa, the modes of treatment principally adopted, and the fatality attending this accident within our State. Our information on placenta previa is principally derived from those physicians whose practical experience seldom extended beyond the bounds of a city or a hospital, where consultations are readily obtained, and all the means at hand to encounter, in the most approved manner, this difficulty. Even under the most favorable circumstances the deaths, in proportion to cases by the different modes of treatment at present adopted, are terrible. According to Simpson one-third of the mothers die, and more than half the children. A high mortality is also shown by Read and Trask; and in the "American Journal of Obstetrics" for 1875, page 182, we find the "results obtained in seventy-four cases of placenta previa, which occurred in Breslau, were, of the mothers sixty-one died and thirteen were saved, thirty-four children lived and forty were lost." It is stated "the methods of treatment were various." If this is occasionally the proportion of deaths to cases of placenta previa which occur in our large cities under the most favorable circumstances for resorting to the present modes of treatment recommended, what is the proportion of deaths to cases which occur in the country?

In the United States, the number of inhabitants residing in the rural districts is greater than the population of our towns and cities, consequently, as placenta previa is an accident not governed by local causes, there would more cases occur in the country than in the cities—probably on an average of three to one. Within the last twenty-five years there have occurred in the vicinity of Aurora, thirteen cases of placenta previa, and but one within the city. Probably many others have occurred within the county of which I have not been informed. If this number is the average for each county, we must have had within the State, during the last twenty-five years, between 1,100 and 1,200 cases. Census reports show that the mortality in Indiana for the year ending June 1, 1870, was for "affections connected with pregnancy, 165 deaths; for child birth, 148." How many

of these were cases of placenta previa, is not known. Fortunately it is not of common occurrence—occurring only once, it has been estimated, in about 500 or 600 cases of obstetrics, but from the little that we know of its occurrence and fatality within our State, it seems to me to be a subject worthy of the investigation of a special committee, the object of which should be to collect statistics, and report to our State Medical Society at some future meeting. No such report has yet been made to our society; all the information that we have obtained on this subject, has been derived from volunteer papers. These papers, although valuable, have presented no facts as statistics of the occurrence of placenta previa within the State of Indiana.

As widely different views have been presented to this Society as to what should be regarded the proper treatment for placenta previa, we will give a few cases that have come under our own observation, and the treatment adopted; and, also, present the experience of other members of our society on this subject. But before doing so, I will direct attention to those cases which occur far away from assistance—over the broad extent of our country—and come under the care of physicians whose range of practice extends five, eight, ten, or fifteen miles into the rural districts, and who have to occasionally encounter this difficulty alone or unaided by professional assistance, and find that in the treatment, self-reliance, and prompt and efficient action are required, and from the responsibility assumed, such cases are attended with an anxiety which the physician whose practice is confined to a city, and who, surrounded by professional assistance, and all the means necessary to treat such cases to the best advantage, seldom experiences in the same degree. It is to discuss the treatment of placenta previa occurring under such circumstances that I ask your attention for a short time.

A physician has a call into the country to attend a case of obstetrics. In leaving home he is not aware that there is unusual danger in the case he is about to attend. After traveling several hours over bad roads, probably in the middle of the night, he finds, on arriving at the house of his patient, that the friends are alarmed—the woman has been flooding; she is pale; the pulse is small and feeble; the bed is saturated with blood; and, on inquiry, it is probably found that this patient has had occasional attacks of flooding for several weeks—but, as the woman was strong and vigorous, and the hemorrhages lasted only a few minutes, no danger was apprehended. On making an examination the vagina is found filled with clotted blood, the os is probably dilated to about the size of a quarter or a half dollar, and immediately above it is felt the spongy mass of the placenta, revealing, beyond all doubt, the alarming fact that he has a case of placenta previa. From the loss of blood that has already taken place and the danger, which is so evident, consultation is desired—for it is his wish that another physician should bear a portion of the responsibility in the treatment of a case attended with so much danger and anxiety—but this patient is five or ten miles in the country, the roads are bad, hours would elapse before a physician could arrive, or Barnes' or Molesworth's dilators be procured. The physician feels that not a moment is to be lost, and the lives of two human beings depend upon him alone—upon his prompt, skillful, and efficient action. This is no fancy sketch. I have had just such cases myself, and present similar cases as the experience of other physicians, and have no doubt that many such cases that have never been recorded have occurred in the practice of the physicians of our State. What is to be done in a case like this when, mind you, the physician is not in a city surrounded by professional assistance, but away in the country, far from his instruments, and conscious that every moment's delay is increasing the danger to his patient? At this point of our subject, let us briefly review the course of treatment recommended by some of our best authors for placenta previa.

Thomas, in his valuable paper, published in the May number of the "American

Practitioner," for 1877, tells us that the means for controlling the hemorrhage while the os dilates, are: First—Distention of the cervix by water bags. Second—Evacuation of the liquor amnii. Third—Partial detachment of the placenta. Fourth—Complete detachment of the placenta. Fifth—The tampon or colpeurynter. Then, for hastening the delivery after the os dilates, ergot, version, forceps, and craniotomy. I will here mention that there are two other modes of controlling the hemorrhage and dilating the os, which Dr. Thomas has not alluded to; the one is the introduction of a globular rubber bag into the uterus—"intra-uterine tampon." This bag has a tube attached to it, through which it is either inflated or filled with fluid. Then, by making traction upon the tube the placenta may be compressed against the sides of the cervix, and, at the same time, this bag assists in dilating the os. This means was recommended by Dr. Chassagny, of Paris, in 1868, and is certainly worthy of a passing notice. It appears to me, however, that the object would be better accomplished by having the bag in the form of a truncated cone. This form would enable the head of the child, during labor pains, to rest on this bag, and assist in producing compression and dilation. This truncated cone could be made by having a string attached to the center of the top of the bag, and passing down through the tube. Traction on the string, before the tube was closed, would even make this bag funnel-shaped, which would enable the head of the child to readily rest within it. This rubber bag, it seems to me, would be better adapted to cases of partial presentation of the placenta than it would to cases where the placenta was centrally attached.

Another plan is the careful dilatation of the os uteri and partial separation of the placenta with the fingers, at the same time making compression against the bleeding vessels of the uterus and placenta, with a roll of muslin or cloth, which will act as a tampon, and also assist in dilatation. This roll of muslin, placed in the palm of the hand, can be forced upwards by the thumb or a uterine sound, so as to enable it to accompany the fingers as they dilate the uterus and separate the placenta. This plan is compression of the bleeding vessels, associated with dilatation of the os, and is a means always at our command, and may be found occasionally of inestimable value. These, then, are the means presented for meeting the difficulties encountered in placenta previa.

Returning now to the case we had under consideration, we see at once that Barnes' or Molesworth's dilators, or the rubber bag, are out of the question. The physician is five or ten miles from home, and has not the dilators or his instruments with him. Considering ourselves in his place, we have then at our command in the treatment of this case, the tampon, the separation of the placenta, the rupture of the membranes, and the forcible dilatation of the cervix and version. Shall we depend upon the tampon alone, as has been so urgently recommended in this society by one of our most experienced and esteemed members, (Dr. Mears,) or shall we depend upon the tampon until the uterus is sufficiently dilated to enable us to turn and deliver? My experience is not favorable to the tampon. Although there may be cases where the tampon has produced the desired effect, still it is a question worthy of our careful consideration, whether the mortality in the treatment of placenta previa has not been increased by the delay which necessarily arises from depending upon the tampon. The implantation of the placenta over the mouth of the uterus is an accident of nature which requires, in most cases, active, intelligent interferences, just as much as the accidental malposition of the child in arm presentation; and we know that in cases of placenta previa, where the placenta is centrally attached, the only safety to the mother is the delivery of the child, the delivery of the placenta and the contraction of the uterus, and that every moment's delay in effecting delivery is attended with danger.

In discussing the value of the tampon in the treatment of placenta previa, it is necessary to examine for a few minutes the source and cause of hemorrhage.

Upon this subject physicians are not agreed. Some regard it as principally uterine; others as almost entirely placental; while others again look upon it as being both placental and uterine; some believe it to be arterial; others as almost entirely venous. We know that the hemorrhage in placenta previa flows most profusely at the moment of a pain, and also that at each pain there is a dilatation of the cervix, and that this dilatation is producing a separation between the uterus and placenta, which tears or ruptures arteries, sinuses and placental vessels. We then see that there must be a ring of ruptured vessels WITHIN the cervix from which the blood is flowing. This ring progressively enlarges with the dilataion of the os. It is at the moment of the rupture of the vessels that the principal hemorrhage takes place. How, then, is the vaginal tampon to arrest this hemorrhage and at the same time allow the os to dilate? The dilatation of the cervix separates the vessels upon which the tampon does not press. Its pressure is only upon the exposed surface of that part of the placenta directly over the dilated os, and also upon the outside of the neck of the uterus, while around the INSIDE of the expanding cervix the vessels are being ruptured with each pain and pouring forth fresh blood.

We see at once that the principal hemorrhage flows from a circle of vessels the tampon can not reach, and that the blood may accumulate with each pain, separating more extensively the placenta until this blood is forced into the uterus, producing a fatal effect—as may be seen in one of the cases which I present. It may be said that the blood coagulates and closes the open vessels, but we know that the blood does not immediately coagulate—and even if it did, it would not instantly arrest the blood flowing from the circle of freshly ruptured vessels within the cervix, no matter what styptic may be used in addition. The slow and gradual dilatation of the cervix, while depending upon the tampon, prolongs the hemorrhage, and the system becomes exhausted producing atony of the uterus; and when dilatation has taken place, if podalic version is then decided on, the patient is frequently in that dangerous condition—the circulation so depressed that she may die even while the hand is in the uterus—similar to the case alluded to by our esteemed friend in his discussion on the treatment of placenta previa before this society in 1876.

There are cases, no doubt, where the tampon would be applicable; in those cases, for instance, where the hemorrhage was not profuse, where the os was but little dilated, where the labor pains are tolerably strong, and where there was evidence that the case was one of partial implantation of the placenta. In such cases it may be safe to apply the tampon, and wait a reasonable time for the os to dilate; but, if the hemorrhage is profuse, and there is evidence of a central implantation of the placenta, not a moment is to be lost. In such cases the danger of depending upon the tampon is the delay, the impossibility of completely controlling the hemorrhage, the danger that the blood may be forced into the uterus, and, another objection is, that it conceals the condition of the os, while the hemorrhage may be progressing to a fatal termination. The uterus is an elastic organ, contracting and expanding during labor, and we believe there is abundance of evidence to show that the tampon may force the blood on one side of the placenta into the uterus in large quantities without the membranes even being ruptured as we know the bag of waters advances and recedes with each labor pain.

If we decide not to depend upon the tampon, shall we then resort to the plan recommended by Simpson—complete detachment of the placenta. Although this plan generally arrests the hemorrhage, still we know that it produces the death of the child, and will certainly not be resorted to if there is a possibilityof success by any other method. But if the case is one where the os is rigid and the woman has become so exhausted that dilatation of the uterus and turning would be extremely hazardous, the detachment of the placenta by arresting the hemorrhage,

might possibly enable the system to recuperate sufficiently to enable the physician to more safely effect delivery. But in the case under consideration we will suppose that we have decided to not adopt Simpson's plan of detaching the placenta.

We have, then, a modification of the old plan of forcible dilatation of the os—using the hand, and, at the same time, a roll of cloth pressed against the bleeding utero-placental vessels as an internal tampon, while we separate a portion of the placenta; and, at the same time, produce as rapidly as practicable, mechanical expansion of the cervix to favor the expulsion of the child, or enable us to effect podalic version and delivery as soon as possible. By this means we have the tampon and forcible dilatation, while with the vaginal tampon alone we attempt to arrest the hemorrhage, depending upon nature to produce the dilatation.

This, of the different modes of treatment at our command, I think is by far the safest, as there is certainly danger to the mother until there is delivery of the child, the placenta and contraction of the uterus. I am well aware that this mode of forcibly dilating the uterus is not exactly in accordance with what is regarded the proper treatment of placenta previa by members of our society. Dr. Parvin tells us in his valuable paper read before this society two years ago, "That it is in such cases of undilated os that the older obstetricians advised if the hemorrhage were threatening, forcible dilatation—a practice which will hardly find any advocates to-day." He says, however, a few pages further on in the same paper, that he would "dilate not indirectly, but directly, by means of hydrostatic pressure." But if we have not Molesworth's or Barnes' dilators with us, and are too far from home to safely wait until they are procured, are we to make no effort to accomplish the object by other means? We know that the great danger in such cases is from delay. The patient is losing blood and every ounce that is lost is exhausting the woman, and producing more or less atony of the uterus; and certainly there must be less danger from a cautious, though forcible dilatation of the os, and delivery, than there is from delay, when there is a continuous loss of blood, which we know, if unchecked, at last prostrates the system below the point of reaction. We believe the treatment recommended by Smellie in 1752: "Attempt to forcibly dilate with the hand, and deliver at once," is far safer than to delay active interference, or depend upon a vaginal tampon. It is more than probable that where one patient has died from the effects of forcible dilatation of the os with the hand, hundreds have died in placenta previa without being delivered. With cautious and judicious management, we may accomplish with the hand almost all that we can with the rubber dilators. It can be made conical in form, and can be used as a dilating wedge, imitating to some extent the mechanical expansion of the cervix by the "bag of waters;" its motions are always under intelligent direction; we know exactly what we are doing. We can bring down the edge of the placenta; compress it during pain—at the moment of flooding; and a roll of cloth pressed into the palm of the hand within the os will give it almost a smooth and uniform pressure upon the bleeding vessels. I believe, then, that by careful manipulation with the hand, accompanied with a tampon, we can accomplish nearly, if not quite all, that we can with Barnes' dilators—dilate the uterus, and at the same time compress the bleeding vessels. Although this compression may not completely arrest the hemorrhage, still it has a tendency to prevent a sudden gush of blood while dilating the os. We know that a large majority of our best authors are now in favor of turning and delivering as soon as practicable.

It is the manner in which the os dilates in placenta previa that generally decides the fate of the patient. If hemorrhage continues, and the os remains undilated, we know that the woman will die undelivered. If the pains are strong, and the os rapidly dilates, the placenta may be forced before the head of the child and the woman delivered before fatal hemorrhage has occurred. If the os dilates

slowly, the woman may sink from loss of blood soon after the child is born, although delivered by natural means. We know that the hemorrhage in placenta previa if not arrested MUST produce death. Forcible dilatation and delivery MAY produce injurious consequences, but it is almost certain to arrest the hemorrhage. When podalic version is effected, hemorrhage is nearly always immediately arrested by pressure in bringing down the feet and body of the child upon the bleeding surface of the utero-placental vessels. In placenta previa, podalic version (as soon as the hand can be introduced) is generally easily effected—for the contractions of the uterus are in most cases enfeebled from loss of blood, and present but little resistance.

It may be said that there are cases where the os is rigid and does not dilate, consequently there would be difficulty in such cases in dilating the os and delivering by podalic version. This we know is occasionally the case, as we have rigidity of the os from two causes—spasmodic rigidity and fibrous or cartilaginous thickening, "active and passive." If the rigidity is of the spasmodic variety, the loss of blood attending placenta previa is almost sure to bring about relaxation—as the abstraction of blood is one of the principal remedies recommended to relieve this difficulty. If the rigidity depends upon the fibrous or condensed tissue, there would be a strong reason for resorting at ONCE TO INCISION—the remedy recommended for this form of rigidity—an operation attended with but little danger comparatively, and one that would enable us to introduce the hand and effect delivery almost immediately. We are told that in such cases we must apply the tampon and wait until the os dilates. But it would require hours to bring about sufficient dilatation of a fibro-cartilaginous os, and during all that time the uterus would be losing its power, and the patient sinking from loss of blood. I would ask, is there not less danger in treating such cases at once according to the rules laid down for the treatment of a rigid os, as recommended in tedious labor, than to wait for the feeble uterine pains to effect this dilatation, while there is so much danger from a continuous stream of blood bringing about irrecoverable prostration? In the language of McDonald, applied to such cases: "Nothing can be gained by delay, * * * so soon as the bleeding is really serious and likely if persisted in to endanger the life of the mother, then I hold we are bound at once and without fear of any evil consequences to proceed to dilatation and delivery." This is the practical or common sense view of the subject, for we know that if the hemorrhage is not arrested death follows, and also that the uterus in time loses its power, and if we delay, the time arrives when the system becomes so prostrated from the loss of blood that the shock produced in the attempt to deliver may cause death. If the placenta is centrally attached, death is likely to be the consequence, unless there is proper interference—dilatation of the os and delivery of the child. Although when the os is rigid the hemorrhage may not be profuse, still there is drainage, a flowing with each pain, which will end in death if not checked. It is more than probable that many cases of placenta previa, which have terminated fatally after podalic version, would have terminated differently had the same means been resorted to at an earlier period; and it is also probable that the delay in attempting to free the uterus from this dangerous accidental implantation of the placenta, has added greatly to the mortality of placenta previa. We therefore regard the question as worthy of our most serious consideration, whether it is not better to risk the danger, not only of forcible dilatation, but even INCISION and delivery at once, than let the patient become irretrievably prostrated before we make an effort to deliver—as we know that delivery and contraction of the uterus are the means by which the patient is saved.

In many cases premature delivery, as recommended by Thomas and others, would probably be the safest course of treatment. But I do not think physicians will resort to premature delivery when placenta previa is merely suspected from a slight

hemorrhage occurring during the seventh or eighth month of pregnancy, for the reason that it is almost impossible at first to make a clear diagnosis, or tell whether the case is one of accidental or unavoidable hemorrhage or one of partial or central implantation of the placenta. This can only be told as the os dilates. If the case is one of only a small presentation of the placenta, premature delivery would scarcely be justified. It is not invariably the case that there are premonitory signs prior to the commencement of labor that would lead us to suspect placenta previa. In a fatal case that came under my notice, there had been no premonitory hemorrhage. As a large portion of the cases occur in the country, where medical assistance is not readily procured, and where the physician is seldom sent for until labor has commenced, this mode of obviating the danger in such cases is not likely to be adopted. But in those cases where hemorrhage is profuse during the seventh or eighth month of pregnancy, and the patient resides some distance in the country, and the physician is sent for in time, and the evidence conclusive of placenta previa, there can be no doubt but that premature delivery would be the proper treatment. But there must be some other mode beside premature delivery to meet the dangers of placenta previa.

Experience shows that the different modes of treatment at present recommended are unsatisfactory, and that additional means must be resorted to before the mortality of this accident is lessened. We know that the only safety to the patient in unavoidable hemorrhage is delivery, and delivery can not take place until there is dilatation of the os, either by natural or artificial means. If the os can be rapidly dilated before the uterus has lost its power, labor may be terminated by natural means; but we know there are cases of placenta previa where nothing but rapid dilatation can save the patient, and in such cases we think there is less danger from the effects of forcible dilatation or even INCISION of the os than there is from the hemorrhage consequent upon delay. But, has there not been an unnecessary apprehension of danger from injury to the os in forcibly attempting to dilate in placenta previa? Many obstetricians, I am fully aware, disapprove of forcible dilatation; but we know that in a large proportion of cases of labor the os is more or less ruptured, without being followed by serious consequences, and the danger from slight laceration of the cervix is nothing in comparison to the danger from hemorrhage, arising from the slow laceration of the vessels, as the placenta is separated from the uterus during the advancement of labor. We have numerous instances on record where, from vigorous pains, "the cervix uteri, in part or entire, has been torn off." These cases, Churchill says, "though involving some danger, do not generally prove fatal." It is frequently the case that the lip of the cervix becomes caught between the head and symphysis pubis, and retained until it becomes edematous and injured from pressure, and no very serious consequences follow. Since the invention of the metrotome, the os and cervix have been incised, expanded, and divided for dysmenorrhea, sterility, and other diseases, in hundreds of cases, without unfavorable results; even the operation of trachelotomy, or the amputation of the cervix, is not regarded as a very dangerous operation. I see, in a recent number of the CLINIC, a paper copied from a St. Petersburg journal, of March 11, 1878, where free incisions were made in the cervix, in a case of atresia of the gravid uterus, with perfect success. The writer says; "There was little pain or hemorrhage, and the case shows how little danger attends this by no means insignificant surgical operation—the patient recovering without fever or other untoward event." MAY NOT FREE INCISIONS OF THE CERVIX YET BE REGARDED AS ONE OF THE MEANS OF PROPERLY TREATING PLACENTA PREVIA, for it is evident that no ONE COURSE of treatment can be adapted to all cases.

If called in the country to a case of obstetrics, and we had not Barnes' or Molesworth's dilators with us, and found that we had a case of placenta previa, the placenta centrally attached, and the os but little dilated, with evidences of fibrous

thickening, the pains making but little impresssion, but sufficient to produce a continuous hemorrhage, this hemorrhage beginning to make an impression on the circulation, and after making efforts with the hand and our tampon, we were unable to effect dilatation, I ask, in a case like this, whether we would not be justified in incising the cervix—an operation which would enable us to effect almost immediate delivery?

Although the danger from incision of the cervix is not great, still we know that there is danger either from inflammation, from cellulitis, septic peritonitis, or a very slight danger from hemorrhage. But the statistics of mortality from operations on the cervix would probably be only one death in about one hundred operations, while the deaths from placenta previa are about one in every three or four cases, showing the danger from incision or slight laceration of the cervix is scarcely anything in comparison to the danger from the hemorrhage, arising from the slow laceration of vessels, as the placenta is torn from the uterus in placenta previa during the progress of labor.

We present thirteen cases of placenta previa, and their treatment. These cases are not brought before the society as offering any thing new, but some of them show the difficulties that physicians have to occasionally encounter alone whose range of practice extends far into the country—also they present additional evidence of the necessity of prompt and efficient action in the treatment of placenta previa—the danger from delay, the evidence that blood may accumulate within the uterus and produce fatal effects after the tampon has been skilfully applied, and also evidence that there is more danger from the continuous hemorrhage accompanying placenta previa than there is from forcible dilatation of the uterus, and immediate delivery of the child. I am well aware that the detail of a few cases will prove but little as to what should be done in the treatment of placenta previa—a subject which has received so much attention from the profession; still, these cases may be of some value as statistics, and will at least show the course of treatment that has proved most successful with some of our Indiana physicians.

CASE 1. I was called in consultation with Dr. A. B. Haines, of Aurora, to visit Mrs. B., the wife of our Presbyterian minister—a lady of intelligence and refinement—age 40, mother of five children. The doctor informed me that he had been called five or six hours previous to attend Mrs. B. in labor. He found the os slightly dilated, but rigid. The case he regarded as one of placenta previa. He at once applied the tampon, with the hope of arresting the hemorrhage while the os dilated; but, he informed me that a slight hemorrhage had continued until about an hour before I was called. I found the patient pale, with rapid pulse, and very much prostrated. On examination, I ascertained there was no external hemorrhage, and, as the tampon appeared to be skilfully and effectually applied, and the pains were feeble, we thought it prudent not to remove the tampon, but endeavor to sustain the strength of the patient and wait for reaction, which probably might be accompanied by dilatation of the os. Consequently, I approved the course of treatment pursued, and did not see the patient again. The doctor afterward informed me that the patient continued in a very prostrated condition; she had occasional light pains for six or seven hours after I saw her, but no external hemorrhage; when, rather stronger pains coming on, forced away the tampon and a large amount of coagulated blood, and she sank rapidly and died without being delivered.

Reflecting on this case, which was the first I had seen of placenta previa, I came to the conclusion that the tampon was an unreliable means to meet this difficulty, as I was well satisfied that in this case it had been most effectually applied.

CASE 2.—I was called into the country, about four miles and a half, to attend Mrs. R. S., age 37. She was the mother of four children; labor generally easy

and of short duration. On my arrival, I found the patient had been in labor about three hours; she was flooding profusely—the bed was saturated with blood; pulse small and rapid; she was pale; the pains were feeble, and the woman appeared very much exhausted. On making an examination, I found the os dilated to about the size of half a dollar, soft and apparently dilatable; immediately above it I could feel the spongy mass of the placenta, which appeared to be centrally implanted. I saw at once there was no time to be lost, for I had no confidence in the tampon and was too far away from any physician to send for assistance. Consequently, I made known to the friends the danger, and determined to make an effort to dilate the cervix, turn the child, and deliver at once. The woman was placed in the proper position; I held my hand for a few minutes in a pail of cold water, thinking it possible the cold hand might have a temporary effect in arresting the hemorrhage; the hand was introduced in the usual manner, and the fingers gradually insinuated between the placenta and uterus on the right side, as the placenta seemed to be centrally attached. The os and cervix dilated, without difficulty, sufficiently to enable me to introduce the hand; the membranes were ruptured, one foot brought down, and version easily effected—as there was scarcely any contraction of the uterus. I found that the cord was pulsating, showing that the child was alive. There had been a good deal of hemorrhage during the operation, but the moment the hips of the child passed the os all hemorrhage ceased. I gave a dose of the fluid extract of ergot, and allowed the hips to remain in the os a short time, as they acted as a tampon and increased the dilatation. On the return of a slight pain I delivered without difficulty. Both mother and child were saved. I can not avoid the conclusion that had I introduced the tampon, and waited a few hours longer for the os to have more fully dilated, and then attempt to turn and deliver, that both mother and child would have been lost.

Case 3.—I was called into the country about four miles to attend Mrs. A. in a case of labor at the full period of gestation. Her age was 37. It was her fifth confinement. I found that the patient had been flooding profusely, and was informed that she had had occasional slight attacks of hemorrhage for several weeks previous. She was pale, her pulse was feeble and frequent, and she was having light pains every five or ten minutes, followed by increased hemorrhage. On examination I found the uterus low in the pelvis, the os dilated to about the size of a quarter of a dollar, firm and rigid, and immediately above it was the placenta, which seemed centrally attached. From the exhausted condition of the patient I thought it unsafe to wait longer for the natural dilatation of the os, but that immediate delivery, if possible, was necessary. Consequently, I determined to make an effort to dilate the os-uteri, turn and deliver at once. I had a conical tampon made of a piece of muslin rolled firmly and tied, varying from half an inch to two inches in diameter. I carefully endeavored to dilate the os with my fingers. It gradually yielded, and I separated the placenta on the right side, and at the same time forced into the cervix the conical tampon by which I could make firm pressure on the bleeding vessels of the uterus. In the partial separation of the placenta, which I made, the hemorrhage was very much increased for a few moments, followed by complete syncope. I heard one of the attendants say that the woman was dead. Without removing my hand I ordered the head lowered and cold water dashed in her face. I then introduced my hand as rapidly as possible into the uterus. In doing so I was fearful the os had slightly given way. The membranes were ruptured, and I had no difficulty in bringing down the feet. The hips were allowed to remain in the cervix for a short time to assist in dilatation, as all hemorrhage by this time appeared to be arrested. The woman revived in a few minutes, stimulants were administered, and she was delivered without difficulty, the uterus contracting and the placenta coming away almost immediately. The child, although very feeble at first, finally did well, and both mother and

child recovered. It may be thought that I was scarcely justified in the heroic treatment adopted, but from the large amount of blood that had already been lost, and the rigid condition of the os, I was fully impressed that to wait for it to dilate and depend upon the tampon to arrest the hemorrhage, would be attended with death both to mother and child.

CASE 4.—The next case that came under my notice was September 5, 1867; Mrs. B., age 30, in labor with her second child. This patient was under the care of Dr. James Lamb, of Aurora. The doctor had been called shortly before I saw her, and found such profuse flooding that he hastily wrote a note requesting my immediate attendance in consultation. I found the woman pale and exhausted, the pulse small and rapid, and the bed saturated with blood. On making an examination, the os was found to be more than half dilated, and the placenta could be felt on the left side, showing that it was a case of partial placenta previa. The symptoms were so alarming, and the pains so weak, that it was evident that not a moment should be lost. We concluded to make an effort to deliver immediately by podalic version. As the woman was so much exhausted, the doctor felt a reluctance in undertaking the delivery—fearful that the patient would die during the operation. As there was no time to lose, the woman was placed in the proper position. I introduced my hand and had no difficulty in turning and bringing down the feet. I found there was no pulsation in the cord, and that the child was dead. As soon as the hips passed the os, all hemorrhage ceased. I had some trouble in delivering the head, but finally succeeded, and the woman made a gradual and perfect recovery.

CASE 5.—This was a case of partial implantation of the placenta, and the hemorrhage appeared to be arrested by simply rupturing the membranes. November—, 1877, I was called to attend Mrs. H., age 28; primipara; full term. She had been in labor about an hour, pains coming on every five or ten minutes, accompanied with hemorrhage. She informed me that she had had a slight hemorrhage about a week previous. On examination, I found the os dilated to about the size of a quarter of a dollar, soft and dilatable, and the edge of the placenta could be readily felt on one side. I at once ruptured the membranes; the pains forced down the head of the child, which, from its pressure on the placenta and neck of the uterus, arrested the hemorrhage. The pains were feeble, but the woman was delivered in about twelve hours without further hemorrhage. Although this patient lost considerable blood she slowly recovered, and both mother and child are now living and well,

Dr. C. B. Miller, of Lawrenceburgh, Indiana, sends me the following cases:

CASE 6.—"Was called in June, 1862, to see Mrs. J. A., in labor with second child. Had had sudden, frequent, and alarming hemorrhages for the past two months. Found placenta attached nearly centrally over the os; patient fainted several times. Succeeded in perforating the placenta, introducing my hand, turning and bringing down the feet, and safely delivering the child. The mother finally rallied, and ultimately recovered."

CASE 7.—"This was a case of partial placenta previa, in which, at time of labor, there was severe hemorrhage. The placenta only covered a portion of the os—the free part admitting the passage of two fingers. Passed the fingers, and making pressure succeeded in passing the hand. Found shoulder presenting; succeeded in turning and bringing down the feet. Case terminated favorably to both mother and child.

Dr. M. H. Harding, of Lawrenceburgh, sends me the following case:

CASE 8.—"Was called July 15, 1865, fifteen miles into the country to see Mrs. H., in her fifth labor. Found her greatly exhausted, and suffering from repeated attacks of syncope from slight elevation of the head, arising from hemorrhage from central implantation of placenta over internal os. The os uteri was suffi-

ciently dilated to permit the introduction of the hand to perforate placenta, and speedily terminated the labor by delivery by the feet; child was still-born. The mother succumbed to the slight post-partum hemorrhage that succeeded the delivery, within thirty minutes, notwithstanding the use of stimulants and other appropriate means to sustain the system and restrain hemorrhage. Previous labors had been normal. If the patient had been seen at an earlier period, probably better results would have been obtained."

Dr. A. B. Haines, of Aurora, Indiana, furnishes the following case:

CASE 9.—"Was called to see Mrs. Louden, October 23, at 6 P. M., two and a half miles in the country; age 30; had had two children. The patient had been suffering for the past few months with malarial fever, and had had one or two slight attacks of hemorrhage at the close of the eighth month and beginning of ninth month of pregnancy—now within a few days of full time. On examination found os very slightly dilated, firm and rigid; placenta presenting, flooding considerable, and pains slight. Applied cold, used the tampon, gave opium. In a short time the flooding ceased entirely, there was no pain, patient perfectly easy. Left at 12 M., with instructions to send for me upon the slightest return of pain or hemorrhage. Was called at 6 A. M. of the twenty-fourth. The patient had remained easy, with no flooding, until 5 o'clock A. M., when it returned profusely, but had again ceased when I arrived. Re-introduced the tampon, and sent for assistance, which arrived at 9 A. M., when it was determined to turn and deliver immediately, which was done—but the patient sank very shortly afterward. Mother and child were lost."

The following case I received from Dr. R. C. Bond, of Aurora Indiana:

CASE 10.—"I was summoned October 18, 1863, to see Mrs. John Olslager, a multipara, residing three miles south of Aurora. I found her blanched and much exhausted from active uterine hemorrhage. The woman was pregnant and about six or seven months advanced, as nearly as could be determined. I at once applied cold to the abdomen, inserted a tampon, and gave large doses of acetate of lead. The hemorrhage was thus promptly arrested. But in less than a week the hemorrhage returned. I resorted to the same line of treatment with satisfactory results, no further active hemorrhage occurring for about one month. There was some passive hemorrhage occasionally during this interval. On the twenty-first of December there was another return of the profuse hemorrhage, which was controlled by cold, ergot, lead and opiates. On the twenty-seventh she was taken with labor-pains, probably at full term, accompanied with hemorrhage. Before I could reach the patient the loss of blood endangered her life, but fortunately I found the os quite well dilated. The placenta was attached mainly to the left side of the os, and by sweeping the internal os forcibly with my fingers, thus forcibly dilating it, and at the same time detaching the placenta, and a strong pain coming on at this critical moment to my relief, the child's head was made to enter the vagina, and delivery soon followed with but little further hemorrhage. The hemorrhage was so great during labor, the patient being much enfeebled by former hemorrhages, that she never rallied from its effects. Subsequent to delivery I had the valuable aid of my friend Dr. Williams, of Rising Sun, but all efforts to save my patient proved unavailing. She died on the fourth or fifth day after confinement."

Dr. T. M. Kyle, of Manchester, Dearborn County, sends me the following case:

CASE 11.—"Mrs. V., age 32; mother of two children, received a slight fall March 2. Three days after, slight hemorrhage appeared, with considerable pain in her back and hips. A physician was called; he gave her an anodyne and ordered her to remain in bed and keep quiet. At midnight, some ten or twelve hours afterward, I was sent for in great haste. I was told that Mrs. V. was flooding to death. On arriving at her bedside found her very weak. She had fainted

a short time before I saw her. On examination I found that I had a case of placenta previa, with the os dilated about the size of a silver dollar, the head presenting. I at once began to make forcible dilatation with my hand in a cone shape in the neck of the uterus. Fortunately there was not very much resistance. As soon as I could reach the feet I performed podalic version, saving the mother. The child was dead. The woman had a slow convalescence. After a few months she regained her health and is now well."

CASE 12.—I received the following case from Dr. H. C. Vincent, of Guilford, Dearborn county:

GUILFORD, IND., 1878.

"DR. SUTTON:

DEAR SIR: In compliance with your request I give you the case of placenta previa which came under my care: Mrs. S., aged 34 years, has had four children (all living) previous to this confinement. Was called on November 5, 1869, on account of uterine hemorrhage, which had been moderately profuse for several hours. Is in her seventh month of pregnancy. On examination found the os undilated, and at the time of examination not a great amount of blood; but from the amount in the bed, was satisfied there had been considerable hemorrhage before I reached the house. She had been feeling well until the day of my visit. Gave her an opiate, ordered rest in a horizontal position, and to call on me if the hemorrhage should continue. Heard nothing more from her until January 3, 1870. Called in a great hurry; messenger stating that she was bleeding very profusely. As I was off several miles, I found her on my arrival in almost a comatose state, pulse very feeble, countenance pale, seemed almost in a dying condition. Ordered about an ounce of whisky, and as soon as she had taken it made an examination. Found the os well dilated, the bed and bedding saturated with blood, and blood still coming freely from the uterus. Stated the case to the husband, who wished to send for Dr. Harding as counselor. Told him I would be glad to do so, but that there was no time, as the child was perhaps already dead, and that his wife would be before he could go to Lawrenceburghg, ten miles, and return. He then told me to go on, and do the best I could for her. I immediately introduced my hand, broke the membranes, found the placenta reaching entirely across the mouth of the womb, pushed it to one side with the end of my fingers, and passed my hand up around the child until I secured the feet. Drew the breech down into the pelvis, when the blood ceased to flow. Gave a dose of fld. ext. ergot, waited about ten minutes, when she had a good expulsive pain, which was the first of any amount she had had throughout the whole time of the operation. The child, with a little traction, was born in about one minute after the pain came on, and the placenta in about fifteen minutes afterward. The child was dead, and to all appearance had been for several hours. Gave half a glass of wine, with one-fourth grain of morphine. Staid with her from the evening of January 3 until the morning of January 4, at which time she was quite comfortable—slept some through the night, pulse getting stronger, countenance cheerful. Ordered wine and light nourishment, with perfect quiet. Remained quite feeble for about two weeks, after which she gained rapidly and made a good recovery. She was at my house about three months ago in perfect health, and has had one child since without any trouble.

"In a practice of near thirty years this is the only case I have had of perfect placenta previa. I had three or four partial cases, where the hemorrhage was not profuse.

"H. C. VINCENT, M. D."

CASE 13.—Since the meeting of the State Medical Society, Dr. S. U. Thomas, of Milroy, Rush county, sends me the following case, which shows most conclusive-

ly the danger from internal hemorrhage after the application of the tampon.

"MILROY, RUSH CO., IND., June 3, 1878.

"DR. GEORGE SUTTON:

"DEAR SIR: In compliance with the promise I made you at the meeting of the State Society, I send the report, in brief, of a case of placenta previa that was treated by Dr. F. M. Pollet and myself, jointly. The age of the patient was thirty; bilious temperment, not very strong physically, and yet never confined to her room in her life by sickness.

"Your friend,

"S. C. THOMAS, M. D."

"I was called to see Mrs. Narcissa Root, daughter of Dr. F. M. Pollett, during his absence, August 9, 1876. I found high fever, labored respiration, intense pain of the head, countenance anxious, and unable to stand on her feet in consequence of it always exciting very severe abdominal pains. For some days previous to this time she had been having morning chills and afternoon fever, attended with excruciating pain in the bowels. She stated to me that anti-periodics and anodynes had not in the least mitigated the symptoms. Supposing that I had a malarial disease to combat, I gave full doses of quinine, morphine, and alterative doses of calomel. I neglected to state that she was approaching, as near as could be ascertained, the end of the sixth month of gestation. Dr. Pollett returning August 10, he took charge of the case. He states that the morning chills, afternoon fever and pain continued, in spite of the best treatment that he could devise, for some weeks At times the pains were so strong and expulsive in character that the doctor thought premature delivery imminent. She had been confined twice before, and her labors were comparatively easy; after which she made quick and good recoveries. During the first two gestating periods she enjoyed unusually good health; but from the time she noted the first symptom of pregnancy, in the last instance, her health began to fail, and she became very feeble—which condition continued up to the day of her death.

"November 11 and 12, 1876: She had some hemorrhage from the uterus, but her father thought not sufficient to excite alarm; he thought it was not more than frequently occurs in natural and uncomplicated labors.

"Dr. Pollett was summoned November 13, at 12½ o'clock A. M., in consequence of sudden hemorrhage from the uterus, while his daughter was up over a bed vessel. He found, on arrival, that she was quite feeble, and much prostrated. The hemorrhage was preceded by a few feeble labor pains. On examination, he found the os uteri but slightly dilated, and very rigid; hence, the doctor was much puzzled in relation to the diagnosis of the case, but supposed it was a case of placenta previa. I saw the patient between 1 and 2 o'clock A. M.; found the pulse feeble and rapid, face blanched, and much general prostration. Examination, per vaginam, revealed but slight dilatation of os, but I soon satisfied myself that we had a case of placenta previa. Although fully aware of the critical condition of our patient and the necessity of immediate interference, the undilated and rigid condition of the os uteri seemed to preclude the possibility of a successful attempt. From this time until about 7½ o'clock A. M., our patient was entirely free from pain, and gave no evidence of hemorrhage excepting that she was gradually growing more feeble. She was siezed with strong labor pains about 8 o'clock A. M., which were attended by considerable hemorrhage. The pains were not of an expulsive character, but simply strong tonic contractions

of the circular fibres of the uterus.

"It was evident that the patient was rapidly sinking, and our fears were that we would not be able to deliver before death would ensue. All of our efforts up to this time to introduce the hand into the uterus were fruitless, because of the unyielding condition of the os. Most unexpectedly all pain ceased, and there was sudden relaxation and softening of the os uteri. Immediately after this we succeeded in rupturing the placenta, turning and delivering by the feet. As soon as the placenta was ruptured (which was easily accomplished) the uterus lost all contractile power, and the hand of the operator met with no resistance. When the cavity of the uterus was reached, there was found a large amount of clotted blood. This fact accounts for the gradual sinking of our patient during the time that the hemorrhage seemed to have entirely ceased. During the turning and delivery our patient sank rapidly, and only survived the birth of the child a few moments. She expired at 9 o'clock A. M.

"I know that there are those who aver that internal hemorrhage, in connection with placenta previa, is impossible, excepting where the membranes are ruptured, but I think the case above narrated will conclusively show the theory to be utterly untenable. For at no time after labor began, until the final effort to deliver was made, was there the slightest evidence that the membranes were not intact. The flow was purely hemorrhagic in character before the rupture of the placenta, and the clotted blood discovered on the introduction of the hand into the uterus was outside of the membranes."

THE END.